

## SUPPORTING ELEMENT FOR STRING MUSICAL INSTRUMENTS

BACKGROUND OF THE INVENTION

5 [0001] The present invention is about a bearing element for stringed musical instruments, in particular electric or acoustic guitars, violins and the like, provided with a body having any plan profile.

10 [0002] It is known that the components of a musical band or the persons keen on playing stringed musical instruments use a bearing element to put in correct and appropriate way the instruments.

15 [0003] The bearing element is generally placed on the stand where the musical band, having more stringed musical elements, is performing during a concert, or in a common room of a house or a building.

20 [0004] The bearing elements for stringed musical elements now available on the market are mostly made of metallic material, but there are also some of them completely made of plastic material.

[0005] Each of them is provided by a frame which, in use configuration, is mostly spread out in vertical direction.

25 [0006] Its arrangement on the bearing surface causes its substantially similarity to an isosceles triangle shape.

[0007] The frame comprises two longitudinal bars connected one to another at one of their ends by articulation means which allow the mutual opening or closing of the longitudinal bars according to the use requirements.

30 [0008] Moreover, the frame comprises support means which, for constructive conformation, allow to house the body of the stringed musical instrument so that it does not slide on the ground.

35 [0009] The support means essentially comprise a couple of arms projecting from the same side of each longitudinal bar of the frame.

[0010] According to the embodiments, the bearing element further comprises regulation means coupled only to the arms, or either to the arms or the frame, used to correctly place guitars, or similar musical instruments with bodies of different shape, on the bearing element.

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[0011] A first adjustment is provided by the mutual opening of the longitudinal bars for placing stringed musical instruments having bodies of different size.

[0012] Another adjustment is provided by the arms, which can be coupled with the frame in several points, so to be placed at different distances from the bearing surface.

[0013] In fact, according to some well known embodiments, each of the longitudinal bars of the frame is provided, across the whole or a part of its length, with a plurality of through holes in which the end of the arm is inserted.

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[0014] Said arm is fixedly secured with the frame by fastening means of known type, such as screws that can be handled by a user through a knob.

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[0015] In this way, the user can place on the bearing element stringed musical elements with irregularly shaped bodies too, like electric guitars used by musical bands playing the so called "heavy metal" genre.

[0016] The user inserts one of the arms inside one of the through holes of the respective longitudinal bar, placing said arm at a predefined distance from the bearing surface, and the other arm inside one of the through holes of the other longitudinal bar, placing again this other arm at a predefined distance from the bearing surface.

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[0017] However, the bearing elements for stringed musical instruments of known type have some inconveniences.

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[0018] A first inconvenience is related to the fact that it is not possible to place stringed musical instruments of any kind, independently from the width or thickness of their body, on these bearing elements.

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[0019] In fact, the support means of the bearing element have a specific conformation

for some kinds of stringed musical instruments, for instance the electric guitars, which is different from that provided for other kinds of stringed musical instruments, like acoustic guitars or violins.

5 [0020] This happens because the widths of the bodies are different for any musical instruments.

[0021] Therefore, the prior art does not allow to place an acoustic guitar on a bearing element comprising support means especially provided for electric guitars.

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[0022] On the contrary, it is possible to place an electric guitar on a bearing element having support means provided for placing an acoustic guitar, but in this way the electric guitar support is rather unstable and unsure.

15 [0023] On the other hand, bearing elements with the purpose of overcoming this inconvenience are available on the market, by using profiled arms which form more than one housing to allow the support of any kind of stringed musical instrument, either acoustic or electric guitars, or violins, or similar, on the bearing element.

20 [0024] However, even this solution, although representing a good evolution with respect to the prior art, does not allow a continuous regulation of the support means depending on the width or thickness of the guitar to be supported body.

25 [0025] In fact, the support means, made of the same material of the frame, that is metal, are fixed to said frame, so their position is not modifiable depending on the kind of body of the musical instrument to be supported by the support element.

30 [0026] As a consequence, it often happens that some stringed musical instruments placed on the support element are not perfectly fastened to it, making possible that a simple hit against said element or against the bearing surface which supports said element causes the fall of the instrument.

35 [0027] Another inconvenience of the prior art is the fact that the arms adjustment at a desired height on the longitudinal bars by the aforesaid fixing means needs the execution of rather complicated manual operations.

[0028] This is mainly due to the fact that the support elements provided with regulation means of known type are made of metallic material, with their components mutually linked by generally screwed coupling means.

5 [0029] The object of the present invention is to overcome the aforesaid inconveniences.

### SUMMARY OF THE INVENTION

10 [0030] In particular, it is the main object of the present invention to provide for a universal bearing element able to support in a safer way with respect to the prior art any kind of stringed musical instrument, independently from the shape and the width of its body.

15 [0031] It is thus an object of the invention to provide for a universal bearing element which allows a continuous regulation of the support means depending on the body variable width of the stringed musical instruments, like acoustic and electric guitars, violins and so on, to be supported.

20 [0032] It is a further object of the invention that the aforesaid regulation is easier and faster with respect to equivalent devices of known type.

[0033] The above mentioned objects are attained by a bearing element for stringed musical instruments which, according to the contents of the main claim, comprises a  
25 mainly vertically arranged frame, able to be placed on a bearing surface, having support means which define a housing for receiving the body of said instrument, wherein each of said support means comprises a couple of mutually opposed jaws, joined together by regulation means able to modify in a continuous way the distance between said jaws.

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[0034] Advantageously, the invention allows to a user, for instance a musician, to adapt in a practical and easy way the support of his stringed musical instrument to the shape of the body placed on the bearing element.

35 [0035] More advantageously, any stringed musical instrument is placed in a safe and stable way on the bearing element of the invention, because the regulation means available on the support means are continuously adapted to the shape and the

thickness of the instrument body.

[0036] This is a considerable improvement with respect to the most recent equivalent devices of known type to which the invention is comparable.

[0037] Still advantageously, the support element of the invention is easy to manufacture and comprises easily available on the market components.

[0038] Moreover, the support element of the invention advantageously has rather convenient production costs, being almost entirely made of plastic components.

[0039] Furthermore, this aspect contributes to confer optimal lightness features to the bearing element of the invention, mainly distinguishing it from similar bearing element of prior art.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0040] Said objects and advantages, and others better specified in the following description, will be better highlighted in the description of preferred embodiments of the invention given in an explanatory way, with reference to the figures of the annexed drawings, wherein:

- [0041] FIG. 1 is an axonometric view of the bearing element of the invention supporting an acoustic guitar;
- [0042] FIG. 2 is an axonometric exploded view of the bearing element of FIG. 1;
- [0043] FIG. 2a is a cross section of a detail of FIG. 2;
- [0044] FIG. 3 is an enlarged bottom view of another detail of FIG. 2;
- [0045] FIG. 4 is a lateral view of the bearing element of FIG. 1;
- [0046] FIG. 5 is an enlarged exploded frontal view of a further detail of FIG. 2;
- [0047] FIG. 6 is a plan view of the detail of FIG. 5;

- [0048] FIG. 7 is an exploded lateral view of the detail of FIG. 5;
- [0049] FIG. 8 is an axonometric view of the bearing element of FIG. 1 in a first configuration;
- [0050] FIG. 9 is an axonometric view of the bearing element of FIG. 1 in a second configuration;
- [0051] FIG. 10 is an axonometric view of the bearing element of FIG. 1 in a third configuration;
- [0052] FIG. 11 is an axonometric view of the bearing element of FIG. 1 in a fourth configuration, supporting an electric guitar having a body of irregular shape; and
- [0053] FIG. 12 is an axonometric view of the bearing element of FIG. 1 in a fifth configuration, supporting an electric guitar having a body of regular shape.

## DESCRIPTION OF THE INVENTION

[0054] The bearing element which is object of the present invention is shown in FIG. 1, where it is generally indicated with numeral 1, supporting a stringed musical instrument, generally indicated with  $S_1$  and specifically representing a classic or, more properly, acoustic guitar.

[0055] The bearing element 1 comprises a mainly vertically arranged frame 2, to be placed on the bearing surface  $A_1$ , provided with support means generally indicated with numeral 3 which define a housing 4 suitable for receiving the body  $C_1$  of the instrument  $S_1$ .

[0056] According to the invention, each of the support means 3 comprises a couple of mutually opposed jaws 5, 6, joined together by regulation means, generally indicated with numeral 7, able to modify in a continuous way the distance between the jaws 5, 6.

[0057] The frame 2 and the support means 3 are preferably made of plastic material, which allows to obtain particular constructive tricks in the components, providing for



economic advantages for the manufacturer and handiness for the user of the bearing element **1**, as it will be better explained as follows.

[0058] With reference to FIG. **2**, it is pointed out that each of the support means **3** comprises an arm **8, 9** protruding from the frame **2** to which is coupled.

[0059] Each of the jaws **5, 6** is slidably coupled to the respective arm **8, 9** and it comprises a shaped body which defines a concave surface **5a, 6a**, preferably made of rubber and bounding on one side the aforesaid housing **4**.

[0060] It is pointed out that, from this point on and until where otherwise specified, the description of the invention will be related to the arm **8** of the support means **3** only, being intended that the treated arguments are totally valid and applicable to the arm **9** too.

[0061] About the regulation means **7**, always in FIG. **2** but more specifically in the enlargement of FIG. **2a** it is noted that they comprise a linear guide **11**, obtained on the upper surface **8a** of the arm **8**, and a linear counter-guide **12** inserted in the linear guide **11**, obtained on the lower surface **6b** of the jaw **6**.

[0062] It is evident that what previously explained about the jaw **6** is valid for the jaw **5** also inserted in the linear guide **11** as well.

[0063] Preferably, but not necessarily, the linear guide **11** has a substantially C-shaped transversal sectional profile, while the linear counter-guide **12** has a substantially T-shaped transversal sectional profile which is adapted to the profile of the linear guide **11**.

[0064] The regulation means **7** further comprise a pin **13**, applied on the jaw **5**, which is slidably inserted in a blind hole **14** obtained in the jaw **6** opposed to the first jaw **5**.

[0065] According to a preferred embodiment hereby described, the arm **8** comprises a longitudinal element applied on the frame **2** by first joint means, generally indicated with numeral **10** and provided with a clasp **15** snap-coupled with the frame **2**.

[0066] More specifically, the arm **8** is provided at one end **8b** with a pin **16** inserted in

a through hole **17** obtained in the clasp **15**.

[0067] A first couple of mutually opposed tangs **18**, **19** snap-disposed against a stubbed portion, not shown in the annexed drawings, made in the internal wall of the through hole **17**, is protruding from the pin **16**, to avoid the accidental separation of the arm **8** from the clasp **15**.

[0068] To better understand how the link between the arm **8** and the frame **2** is obtained, one can see that said frame **2** comprises two longitudinal bars **20**, **21** mutually connected by joint means generally indicated with numeral **22**.

[0069] Each of the longitudinal bars **20**, **21** is provided with a plurality of through holes, generally indicated with numeral **23**, which are disposed on the entire length of each of said longitudinal bars **20**, **21** and each of them able to receive the snap-inserted clasp **15**.

[0070] This clasp **15** is externally provided with a couple of fins **46**, **47** snap-coupled with the external wall **20c**, **21c** of the respective longitudinal bar **20**, **21**.

[0071] In this way the clasp **15** can be detached, maybe even accidentally, from the longitudinal bar **20** only if the arm **8** has been already released by the same clasp **15**.

[0072] It follows an advantage concerning the safe coupling between the support means **3** and frame **2** of the bearing element **1**, essentially due to the fact that the components involved in the coupling are made of plastic material.

[0073] The use of the aforesaid plastic material allows in fact to manufacture flexible pieces which provide for the rapid insertion between the elements to be mutually coupled.

[0074] Furthermore, the user has to take off the musical instrument **S<sub>1</sub>** from the bearing element **1** before proceeding to release the arm **8** from the longitudinal bar **20**, thus avoiding the execution of dangerous adjustment operations while the musical instrument **S<sub>1</sub>** is still placed on the bearing element **1**.

[0075] Moreover, the through holes **23** allow the arrangement of the arm **8** and its



relative clasp **15** at different heights from the bearing surface **A<sub>1</sub>**, to give the more adapted support for the musical instrument **S<sub>1</sub>** by the bearing element **1**.

[0076] This is performed with respect to the instrument body shape, as better explained hereinafter.

[0077] According to further embodiments of the invention, the above described through holes could be obtained just on a portion of the entire length of each longitudinal bar, in order to grant anyway a sufficient adjustability in height of the support means.

[0078] The FIG. **2** furthermore shows that each of the longitudinal bar **20**, **21** leans on a corresponding substantially horizontally arranged base **39**, **40** which is put in contact with the bearing surface **A<sub>1</sub>**, to which is connected by second joint means generally indicated with numeral **41**.

[0079] In detail, the second joint means **41** comprise a second couple of mutually opposed tangs **42**, **43** placed at the first end **20a**, **21a** of each longitudinal bar **20**, **21**, which are snap-coupled in a wall obtained in a cavity **44**, **45** made in the substantially intermediate portion **39a**, **40a** of the base **39**, **40**.

[0080] Said snap-coupling is better shown in FIG. **3** for the longitudinal bar **21** only, where it can be seen that the second tangs **42**, **43** are snap-placed in a removable but stable manner against the wall **44a** obtained in the cavity **44**.

[0081] The following FIG. **4** shows that each of the longitudinal bars **20**, **21** is arranged according to a longitudinal axis **Y'**, which defines an acute angle  $\alpha$  with a vertical reference axis **Y**, to enable the inclined support of the instrument **S<sub>1</sub>**, not shown in this figure, on the frame **2**.

[0082] Both in FIG. **2** and in FIG. **4** it is furthermore highlighted that the base **40** is provided with profiled feet **48**, **49** arranged at the opposite ends **40b**, **40c** of the base **40** and made of rubber, used to grant a correct and stable support of the frame **2** on the bearing surface **A<sub>1</sub>**.

[0083] It should be clear that said constructive detail is also present on the other base

**39** of the bearing element **1**.

[0084] Concerning the joint means **22** between the longitudinal bars **20**, **21**, in FIG. 2 it is shown that they comprise a couple of mutually complementary profiled  
5 appendixes **24**, **25**, each of them provided on a second end **20b**, **21b** of the comb-shaped longitudinal bars **20**, **21** respectively, to mutually interpenetrate.

[0085] As evidenced in FIGs. from **5** to **7**, particularly in FIG. **6**, each of the profiled appendixes **24**, **25** has a corresponding pin **26**, **27**.

10 [0086] The pin **26** is placed between two contiguous elements, indicated with numerals **30** and **31**, of the comb of the profiled appendix **24**, while the pin **27** is placed between two contiguous elements, indicated with numerals **32** and **33**, of the comb of the profiled appendix **25**.

15 [0087] In the step in which the longitudinal bars **20**, **21** are mutually connected, the pin **26** is slidingly coupled with a groove **28** made on the lateral surface of the element **33** of the comb belonging to the profiled appendix **25**, while the pin **27** is slidingly coupled with a groove **29** made on the lateral surface of the element **30** belonging to  
20 the profiled appendix **24**.

[0088] The groove **29** comprises a substantially linear portion **29a** extending from the lateral edge **24a** to the central portion **24b** of the profiled appendix **24**, in which the pin **27** of the profiled appendix **25** slides.

25 [0089] The groove **29** furthermore comprises an enlarged section **29b** of substantially circular shape, obtained in the central portion **24b** of the profiled appendix **24**, inside which the pin **27** rotates to allow the mutual opening of the longitudinal bars **20**, **21** according to an angle substantially comprised from  $0^{\circ}$  and  $90^{\circ}$ .

30 [0090] It should be understood that what previously explained about the groove **29** made in the profiled appendix **24** is valid also for the groove **28** made in the profiled appendix **25**.

35 [0091] Both grooves **28**, **29** are made on the lateral surface of the corresponding comb element **33**, **30** turned towards the pins **27**, **26**, respectively.

[0092] The enlarged section **29b** of the groove **29** is provided with a step **34** obtained along a peripheral portion **129b** of the enlarged section **29b**.

5 [0093] The step **34** describes an arc of a circumference substantially variable from  $0^\circ$  and  $90^\circ$  and comprised between two counterpart walls, respectively indicated with numerals **35** and **36**.

10 [0094] Moreover, the step **34** is provided with a plurality of ribs generally indicated with numeral **37**, to which a stop element **38**, placed adjacent to the pin **27** belonging to the opposite profiled appendix **25** is coupled, in order to block in different positions the opening between the longitudinal bars **20**, **21** depending on the body dimensions of the stringed musical instrument to be placed on the bearing element **1**.

15 [0095] When it is put in contact with the tappet walls **35**, **36**, the stop element **38** is furthermore used to block the mutual movement of the longitudinal bars **20**, **21** in their closed ( $\beta \approx 0^\circ$ ) and fully opened ( $\beta \approx 90^\circ$ ) positions.

20 [0096] The shape of the joint means **22** prevents the forced or accidental separation of the longitudinal bars **20**, **21** when even a slight opening angle  $\beta$  is formed between them.

25 [0097] In fact, when the longitudinal bars **20**, **21** are in the configuration of FIG. 8, the user could advantageously separate them, for instance to store or easily transport the bearing element **1**.

30 [0098] On the contrary, even if the user places the longitudinal bars **20**, **21** partially and mutually opened, obtaining an acute opening angle  $\beta$ , like in the configuration of FIG. 9, or fully opened, describing a substantially right opening angle  $\beta$ , as shown for instance in FIG. 10, he can not separate them except for applying a force that in any case irreparably compromises the functionality of the bearing element **1**.

35 [0099] This aspect is another distinctive element of the invention, which concurs to make stable and safe the support of a stringed musical instrument on the bearing element, providing for a not negligible advantage taking into account the economic value of the musical instruments.

[0100] Operatively, as shown in FIGs. 9 or 10, the user places the bearing element 1 on the bearing surface **A<sub>1</sub>**, with the longitudinal bars 20, 21 opened according to his needs, therefore as a function of the shape of the instrument **S<sub>1</sub>**, like an acoustic guitar, body **C<sub>1</sub>**.

[0101] Then he connects the arm 8, 9 to the respective longitudinal bars 20, 21 at the same height of the bearing surface **A<sub>1</sub>**, first inserting the clasp 15 inside one of the through holes 23 and then the pin 16 inside said clasp 15.

[0102] Finally, the user acts on the regulation means 7, placing the jaws 5, 6 of each arm 8, 9 to a mutual distance and finding on them the housing 4 ready to receive the body **C<sub>1</sub>**.

[0103] At this point, he puts the instrument **S<sub>1</sub>** on the bearing element 1, placing the body **C<sub>1</sub>** on the support means 3 and against the frame 2, at the joint means 22, in a precise and safe way.

[0104] In FIG. 11 the bearing element of the invention is shown, generally indicated with numeral 100 and placed on a bearing surface **A<sub>2</sub>**, supporting a stringed musical instrument, generally indicated with **S<sub>2</sub>** and represented by an electric guitar provided with a body **C<sub>2</sub>** of regular shape and limited thickness, shaped according to the particular and actual tendencies of the "heavy metal bands".

[0105] In this situation, the user moves the jaws 103, 104 of each arm 106, 107 close to each other because the electric guitar **S<sub>2</sub>** has a body **C<sub>2</sub>** of lesser thickness than the one of the acoustic guitar **S<sub>1</sub>**.

[0106] He then places each of the jaws 103, 104 close to the body **C<sub>2</sub>** of the musical instrument **S<sub>2</sub>** making turning the pin, not visible, of each arm 106, 107 around its own rotation axis **Z** and inside the through hole, neither visible, of the clasp 108.

[0107] This allows the user to place the support means, generally indicated with 102, mainly close to the body **C<sub>2</sub>** of the musical instrument **S<sub>2</sub>**, securing it in a more stable way to the frame 101.

[0108] From this point of view, the invention provides for a considerable advantage with respect to the equivalent bearing elements of known type, which do not allow to place support means close to different stringed musical instruments in the way shown in FIG. 11.

5 [0109] FIG. 12 then shows the bearing element of the invention, generally indicated with numeral **200**, supporting a stringed musical instrument generally indicated with **S<sub>3</sub>** and represented by an electric guitar provided in this specific case with a body **C<sub>3</sub>** of irregular shape.

10 [0110] In the present example, the user puts one of the arms **203**, **204** forming the support means, generally indicated with numeral **202**, at a different height from the bearing surface **A<sub>3</sub>** with respect to the other arm, so that the guitar **S<sub>3</sub>** is stably supported on said support means, generally indicated with numeral **202**, although  
15 having a body **C<sub>3</sub>** of irregular shape.

[0111] He inserts the arm **204** inside one of the through holes **205**, provided along the whole longitudinal bar **207**, which is at a different height from the bearing surface **A<sub>3</sub>** with respect to another through hole **205** obtained on the other longitudinal bar  
20 **206** in which the arm **203** is inserted, to adapt the support means **202** to the asymmetric shape of the bottom **F<sub>3</sub>** of the guitar **S<sub>3</sub>** body **C<sub>3</sub>**.

[0112] According to the invention, the arms of the support means are easily released from the longitudinal bars and placed inside the proper through hole, to obtain the  
25 stable leaning on the support element of the musical instrument according to the conformation of its body.

[0113] The bearing element of the invention is thus a universal means able to support any kind of stringed musical instrument, either an electric or acoustic guitar, a violin or  
30 similar.

[0114] The adjustment of the support means is almost complete, being adapted to any thickness and shape of the body of stringed musical instruments nowadays available on the market.

35 [0115] The support means are adjustable in height, length and around a rotation axis,

and they can change their disposition according to the thickness and shape of the body of the stringed musical instrument to be supported.

5 [0116] The bearing element maintains anyway the opening adjustment of the longitudinal bars which form it, according to the dimensions of the stringed musical instrument.

10 [0117] The constructive simplicity of the bearing element components according to the invention provides for a regulation system of the musical instrument bearing means which is easier and faster with respect to the prior art.

15 [0118] On the basis of this disclosure, it is thus evident that the bearing element of the invention achieves all the objectives and realizes all the previously mentioned advantages.

[0119] In the executive step, modifications to the bearing element of the invention can be provided, consisting for instance in a different shape of the frame supporting the stringed musical instrument.

20 [0120] Besides that, in other embodiments the support and regulation means can have different shapes with respect to the previously described ones, without impairing the advantages provided by the present invention.

25 [0121] Moreover, in further embodiments the material of the bearing element could be of different kind from the indicated one, for instance aluminium.

[0122] All the described and cited, but not shown in the annexed drawings, embodiments should be intended as protected by the present patent if they fall in scope of protection of the following claims.